STIC-ILL

29292

From: Lukton, David
Sent: Tuesday, May 23, 2000 12:48 PM
To: STIC-ILL

David Lukton
308-3213
AU 1653
SN 09/450217

****

L9 ANSWER 1 OF 2 CABA COPYRIGHT 2000 CABI

AN 96:108914 CABA
DN 960403427

TI Glycomacropeptide from cheese whey protein concentrate enhances IgA production by lipopolysaccharide-stimulated murine spleen cells

AU Yun, S. S.; Sugita-Konishi, Y.; Kumagai, S.; Yamauchi, K.

CS College of Agriculture and Veterinary Medicine, Nihon University, Setagaya-ku, Tokyo 154, Japan.

SO Animal Science and Technology, (1996) Vol. 67, No. 5, pp. 458-462. 15 ref.
ISSN: 0021-5309

agl. 49. N62

DT Journal
LA English

NO 5/22

agl
5/25
100
COMPLETED
6
54

297291

STIC-ILL

From: Lukton, David
Sent: Tuesday, May 23, 2000 12:48 PM
To: STIC-ILL

David Lukton
308-3213
AU 1653
SN 09/450217

****

L9 ANSWER 2 OF 2 CABA COPYRIGHT 2000 CABI

AN 94:110130 CABA

DN 940404658

TI Functional milk protein products

AU Mulvihill, D. M.; Andrews, A. T. [EDITOR]; Varley, J. [EDITOR]

CS Food Chemistry Department, University College, Cork, Irish Republic.

SO Biochemistry of milk products, (1994) pp. 94-113. Special Publication No. 150. 82 ref.
Publisher: Royal Society of Chemistry. Cambridge
Price: pounds sterling39.50.
ISBN: 0-85186-702-2

agl: SF253. B56 (1994)

CY United Kingdom
DT Conference Article
LA English

Checked out NDS/23

agl 5/25

COMPLETED 21 1.89

=> file caba

=> e glycomacropeptide

E1 1 GLYCOLYZING/BI
E2 1 GLYCOMACRO/BI
E3 101 --> GLYCOMACROPEPTIDE/BI
E4 26 GLYCOMACROPEPTIDES/BI
E5 1 GLYCOMAURIN/BI
E6 1 GLYCOMAURROL/BI
E7 4 GLYCOMETABOLIC/BI
E8 1 GLYCOMETHACRYLATE/BI
E9 1 GLYCOMETHYL/BI
E10 1 GLYCOMIMESIS/BI
E11 1 GLYCOMONOMERS/BI
E12 1 GLYCOMUL/BI

=> s e3-e4

101 GLYCOMACROPEPTIDE/BI
26 GLYCOMACROPEPTIDES/BI
L1 116 (GLYCOMACROPEPTIDE/BI OR GLYCOMACROPEPTIDES/BI)

=> s glycomacro peptide#

1 GLYCOMACRO
23703 PEPTIDE#
L2 1 GLYCOMACRO PEPTIDE#
(GLYCOMACRO(W)PEPTIDE#)

=> s caseinoglycomacro?

L3 2 CASEINOGLYCOMACRO?

=> s caseinglycomacro?

L4 0 CASEINGLYCOMACRO?

=> s l1-l3

L5 119 (L1 OR L2 OR L3)

=> s whey

L6 18820 WHEY

=> s anion## or cation## or ion##

9445 ANION##
16871 CATION##
38920 ION##
L7 55513 ANION## OR CATION## OR ION##

=> s l6(15a)l7

L8 544 L6(15A)L7

=> s l8(L)l5

L9 2 L8(L)L5

=> d bib,ab,kwic 1-2

L9 ANSWER 1 OF 2 CABA COPYRIGHT 2000 CABI
AN 96:108914 CABA
DN 960403427
TI Glycomacropeptide from cheese whey protein concentrate enhances IgA production by lipopolysaccharide-stimulated murine spleen cells
AU Yun, S. S.; Sugita-Konishi, Y.; Kumagai, S.; Yamauchi, K.
CS College of Agriculture and Veterinary Medicine, Nihon University, Setagaya-ku, Tokyo 154, Japan.
SO Animal Science and Technology, (1996) Vol. 67, No. 5, pp. 458-462. 15 ref.
ISSN: 0021-5309
DT Journal
LA English
AB The effect of kappa -casein ***glycomacropeptide*** (GMP) which was isolated from cheese ***whey*** protein concentrate (CWPC) using ***anion*** -exchange chromatography, on immunoglobulin (Igs) production in lipopolysaccharide (LPS)-stimulated splenocytes was investigated. The effect of GMP on Igs production was studied by determining the concentration of each class of Igs (IgM, IgG1 and IgA) in the supernatant of splenocytes cultured with LPS and various concentrations of GMP by sandwich-ELISA. GMP enhanced IgA production, but not the other Igs production, by LPS-stimulated splenocytes. The fluorescence-activated cell

sorter (FACS) analysis of the cultured splenocytes revealed that GMP increased the population of surface IgA-positive cells (sIgA+ cells). These results suggest that GMP enhances IgA production by LPS-stimulated splenocytes by increasing the population of sIgA+ cells.

AB The effect of kappa -casein ***glycomacropeptide*** (GMP) which was isolated from cheese ***whey*** protein concentrate (CWPC) using ***anion*** -exchange chromatography, on immunoglobulin (Igs) production in lipopolysaccharide (LPS)-stimulated splenocytes was investigated. The effect of GMP on Igs production was studied. . .

L9 ANSWER 2 OF 2 CABA COPYRIGHT 2000 CABI
AN 94:110130 CABA
DN 940404658
TI Functional milk protein products
AU Mulvihill, D. M.; Andrews, A. T. [EDITOR]; Varley, J. [EDITOR]
CS Food Chemistry Department, University College, Cork, Irish Republic.
SO Biochemistry of milk products, (1994) pp. 94-113. Special Publication No. 150. 82 ref.
Publisher: Royal Society of Chemistry. Cambridge
Price: pounds sterling39.50.
ISBN: 0-85186-702-2
CY United Kingdom
DT Conference Article
LA English
AB This subject is reviewed under the following headings: production of casein and caseinates (conventional methods for production of caseins, non-conventional methods for production of caseins, caseinate production, fractionation of casein, production of whey protein-enriched products, dried whole whey, dried demineralized ***whey*** , dried demineralized, delactosed ***whey*** , ***whey*** protein concentrate and ***whey*** protein isolate-ultrafiltration-diafiltration and ***ion*** -exchange adsorption, lactalbumin production, and fractionation of ***whey*** proteins- beta -lactoglobulin and alpha -lactalbumin, minor ***whey*** protein products, lactoperoxidase, lactotransferrin, Ig and ***glycomacropeptide***); co-precipitate production; production of milk protein concentrates; chemically, physically and enzymically modified milk proteins (physical modification of milk proteins and milk protein hydrolysates); and genetically engineered milk proteins.
AB . . . methods for production of caseins, caseinate production, fractionation of casein, production of whey protein-enriched products, dried whole whey, dried demineralized ***whey*** , dried demineralized, delactosed ***whey*** , ***whey*** protein concentrate and ***whey*** protein isolate-ultrafiltration-diafiltration and ***ion***

-exchange adsorption, lactalbumin production, and fractionation of ***whey*** proteins- beta -lactoglobulin and alpha -lactalbumin, minor ***whey*** protein products, lactoperoxidase, lactotransferrin, Ig and ***glycomacropeptide***); co-precipitate production; production of milk protein concentrates; chemically, physically and enzymically modified milk proteins (physical modification of milk proteins and. . .

=> file fsta

=> d history

(FILE 'HOME' ENTERED AT 12:28:35 ON 23 MAY 2000)

FILE 'CABA' ENTERED AT 12:28:43 ON 23 MAY 2000
E GLYCOMACROPEPTIDE
L1 116 S E3-E4
L2 1 S GLYCOMACRO PEPTIDE#
L3 2 S CASEINOGLYCOMACRO?
L4 0 S CASEINGLYCOMACRO?
L5 119 S L1-L3
L6 18820 S WHEY
L7 55513 S ANION## OR CATION## OR ION##
L8 544 S L6(15A)L7
L9 2 S L8(L)L5

FILE 'FSTA' ENTERED AT 12:31:28 ON 23 MAY 2000

=> s l9

12685 WHEY
2937 ANION##
3123 CATION##
13404 ION##
57 GLYCOMACROPEPTIDE/BI
24 GLYCOMACROPEPTIDES/BI
1 GLYCOMACRO
5242 PEPTIDE#
1 GLYCOMACRO PEPTIDE#
(GLYCOMACRO(W)PEPTIDE#)
0 CASEINOGLYCOMACRO?
L10 2 L8(L)L5

=> s l8 and l5 not l9

```
      12685 WHEY
       2937 ANION##
       3123 CATION##
      13404 ION##
        446 L6(15A)L7
         57 GLYCOMACROPEPTIDE/BI
         24 GLYCOMACROPEPTIDES/BI
          1 GLYCOMACRO
       5242 PEPTIDE#
          1 GLYCOMACRO PEPTIDE#
            (GLYCOMACRO(W)PEPTIDE#)
          0 CASEINOGLYCOMACRO?
      12685 WHEY
       2937 ANION##
       3123 CATION##
      13404 ION##
         57 GLYCOMACROPEPTIDE/BI
         24 GLYCOMACROPEPTIDES/BI
          1 GLYCOMACRO
       5242 PEPTIDE#
          1 GLYCOMACRO PEPTIDE#
            (GLYCOMACRO(W)PEPTIDE#)
          0 CASEINOGLYCOMACRO?
          2 L8(L)L5
L11       0 L8 AND L5 NOT L9
```

=> s l9

```
      11168 WHEY
     252053 ANION##
     322344 CATION##
    1106503 ION##
        122 GLYCOMACROPEPTIDE/BI
         94 GLYCOMACROPEPTIDES/BI
          3 GLYCOMACRO
     287534 PEPTIDE#
          2 GLYCOMACRO PEPTIDE#
            (GLYCOMACRO(W)PEPTIDE#)
          7 CASEINOGLYCOMACRO?
L12       9 L8(L)L5
```

=> s l12 not l9

```
      11168 WHEY
     252053 ANION##
     322344 CATION##
    1106503 ION##
        122 GLYCOMACROPEPTIDE/BI
         94 GLYCOMACROPEPTIDES/BI
          3 GLYCOMACRO
     287534 PEPTIDE#
          2 GLYCOMACRO PEPTIDE#
            (GLYCOMACRO(W)PEPTIDE#)
          7 CASEINOGLYCOMACRO?
          9 L8(L)L5
L13       0 L12 NOT L9
```

=> s l8 and l5 not l9

```
      11168 WHEY
     252053 ANION##
     322344 CATION##
    1106503 ION##
        523 L6(15A)L7
        122 GLYCOMACROPEPTIDE/BI
         94 GLYCOMACROPEPTIDES/BI
          3 GLYCOMACRO
     287534 PEPTIDE#
          2 GLYCOMACRO PEPTIDE#
            (GLYCOMACRO(W)PEPTIDE#)
          7 CASEINOGLYCOMACRO?
      11168 WHEY
     252053 ANION##
     322344 CATION##
    1106503 ION##
        122 GLYCOMACROPEPTIDE/BI
         94 GLYCOMACROPEPTIDES/BI
          3 GLYCOMACRO
     287534 PEPTIDE#
          2 GLYCOMACRO PEPTIDE#
            (GLYCOMACRO(W)PEPTIDE#)
          7 CASEINOGLYCOMACRO?
          9 L8(L)L5
L14       5 L8 AND L5 NOT L9
```

=> d bib,kwic 1-5

L14 ANSWER 1 OF 5 CA COPYRIGHT 2000 ACS
AN 131:129138 CA
TI Comparison of analytical methods to quantify whey proteins
AU Norris, C. S.; Tsao, M.; Haggarty, N. W.; Otter, D. E.
CS New Zealand Dairy Research Institute, Palmerston North, N. Z.
SO Int. Dairy Fed. [Spec. Issue] S.I. (1998), 9804, 123-139
CODEN: IDFSEO; ISSN: 1025-8515
PB International Dairy Federation
DT Journal
LA English
RE.CNT 14
RE
(1) Grappin, R; Advanced Dairy Chemistry - Protein 1992, P7
(2) Hambraeus, L; Developments in Dairy Chemistry - 1, Proteins 1982, P303
(3) Humphrey, R; J Dairy Sci Technol 1984, V19, P197 CA
(4) Jenness, R; Developments in Dairy Chemistry 1982, P108
(6) Kinghorn, N; J Chromatogr A 1995, V700, P111 CA
ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB Anal. of the 4 main whey proteins (bovine serum albumin, IgG, .alpha.-lactalbumin, .beta.-lactoglobulin) and other minor proteins (milk fat globular membrane, proteose-peptone components, ***glycomacropeptide***) by various available methods (e.g. PAGE, HPLC, capillary electrophoresis) was compared and recommendations made as to the most useful methods for anal., depending on the speed desired and the material analyzed. Advantages and disadvantages of the methods are also discussed.
IT Capillary electrophoresis
Capillary zone electrophoresis
Food analysis
HPLC
High-performance gel-permeation chromatography
Ion exchange HPLC
Polyacrylamide gel electrophoresis
(comparison of anal. methods to quantify ***whey*** proteins)
IT Caseins, analysis
RL: ANT (Analyte); ANST (Analytical study)
(.kappa.-, ***glycomacropeptides*** ; comparison of anal. methods to quantify whey proteins)

L14 ANSWER 2 OF 5 CA COPYRIGHT 2000 ACS

AN 130:281142 CA
TI Production of kappa-casein macropeptide
IN Etzel, Mark R.
PA Wisconsin Alumni Research Foundation, USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9918808	A1	19990422	WO 1998-US21283	19981008
US 5968586	A	19991019	US 1997-947700	19971009
AU 9910735	A1	19990503	AU 1999-10735	19981008

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1997-947700 19971009
US 1998-127573 19980731
WO 1998-US21283 19981008
RE.CNT 11
RE
(1) Agricultural & Food Res; GB 2188526 A 1987
(3) Fukumoto, L; FOOD RESEARCH INTERNATIONAL 1994, V27(4), P335 CA
(6) Mirabel, B; ANN NUTR ALIM 1978, V32, P243 CA
(8) Outinen, M; MILCHWISSENSCHAFT 1995, V50(10), P570 CA
(11) Tanimoto, M; BIOSCIENCE, BIOTECHNOLOGY, AND BIOCHEMISTRY 1992, V56(1), P140 CA
ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB The present invention relates to a process for producing .kappa.-casein macropeptides having nutraceutical properties from ***whey*** using ***ion*** exchange and/or immobilized metal affinity chromatog. A hydrolyzed .kappa.-casein macropeptide nutraceutical food product having less than about 4 % total of the hydrophobic arom. amino acids phenylalanine, tryptophan, and tyrosine is also disclosed.
ST casein macropeptide ***whey*** ***ion*** exchange affinity chromatog

IT .kappa.-Caseins
RL: FFD (Food or feed use); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(***glycomacropeptides*** ; prodn. of kappa-casein macropeptide by ion exchange and/or immobilized metal affinity chromatog.)
IT Affinity chromatography
Ion exchange chromatography
Whey
(prodn. of kappa-casein macropeptide by ***ion*** exchange and/or immobilized metal affinity chromatog.)
IT ***Whey*** proteins
RL: FFD (Food or feed use); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prodn. of kappa-casein macropeptide by ***ion*** exchange and/or immobilized metal affinity chromatog.)

L14 ANSWER 3 OF 5 CA COPYRIGHT 2000 ACS
AN 127:148574 CA
TI Method of separating and recovering proteins from a protein solution
IN Ayers, John Stephen; Elgar, David Francis; Pritchard, Mark
PA Ayers, John Stephen, N. Z.; Elgar, David Francis; Pritchard, Mark
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9726797	A1	19970731	WO 1997-NZ5	19970127
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2242933	AA	19970731	CA 1997-2242933	19970127
AU 9714580	A1	19970820	AU 1997-14580	19970127
AU 708761	B2	19990812		
EP 876106	A1	19981111	EP 1997-901281	19970127
R: DE, DK, FR, GB, NL, IE				

PRAI NZ 1996-280892 19960126
WO 1997-NZ5 19970127

AB A preparative method of isolating a preselected whey protein or group of whey proteins from a soln. is provided. The method comprises the following steps: (a) contacting a ***whey*** protein soln. with a preselected ***ion*** exchanger for a time and at a temp. sufficient to enable the preselected ***whey*** protein to be adsorbed; wherein the whey protein soln. has (1) a protein content in the range of about 5 % to about 20 % by wt., (2) a pH of a preselected level, which is the level at which the preselected ***whey*** protein or group of ***whey*** proteins selectively binds to the preselected ***ion*** exchanger, and (3) a reduced ***ionic*** strength; and (b) recovering either or both of the following: (1) the ***whey*** protein component adsorbed in step (a), and (2) the breakthrough whey protein component not adsorbed in step (a). It is preferred that the ***whey*** protein soln. is a retentate obtained via ultrafiltration of ***whey*** , having reduced ***ionic*** strength, or a ***whey*** protein conc. powder which has been reconstituted with water.

IT Caseins, biological studies
RL: BOC (Biological occurrence); BIOL (Biological study); OCCU (Occurrence)
(.kappa.-, ***glycomacropeptides*** ; method of sepg. and recovering proteins from a protein soln.)

L14 ANSWER 4 OF 5 CA COPYRIGHT 2000 ACS
AN 118:232502 CA
TI Heat-induced gelation of .beta.-lactoglobulin. Influence of pH, ***ionic*** strength and presence of other ***whey*** proteins
AU Gault, P.; Fauquant, J.
CS Lab. Rech. Technol. Lait., INRA, Rennes, 35042, Fr.
SO Lait (1992), 72(6), 491-510
CODEN: LAITAG; ISSN: 0023-7302
DT Journal
LA French
TI Heat-induced gelation of .beta.-lactoglobulin. Influence of pH, ***ionic*** strength and presence of other ***whey*** proteins
IT Caseins, properties
RL: PRP (Properties)
(.kappa.-, ***glycomacropeptides*** , .beta.-lactoglobulin thermal gelation response to)

L14 ANSWER 5 OF 5 CA COPYRIGHT 2000 ACS
AN 115:206490 CA

TI A new isolation method of caseinoglycopeptide from sweet cheese whey
AU Saito, Tadao; Yamaji, Atsuo; Itoh, Takatoshi
CS Coll. Agric., Tohoku Univ., Sendai, 981, Japan
SO J. Dairy Sci. (1991), 74(9), 2831-7
CODEN: JDSCAE; ISSN: 0022-0302
DT Journal
LA English
AB Caseinoglycopeptides were isolated from sweet cheese ***whey*** by EtOH pptn. and ***ion*** -exchange chromatog. after heat coagulation of ***whey*** protein. The most successful method for the highest yield was by heating 10% (wt./vol.) whey soln. at pH 6.0 for 1 h, followed by pptn. with cold 50% EtOH. The caseinoglycopeptide was fractionated into sialo- and asialo-caseinoglycopeptides by peanut lectin-affinity chromatog. Caseinoglycopeptides exhibited 5 peaks on reverse-phase HPLC, which were divided into the first peak of an asialo-caseinoglycopeptide and then sialo-caseinoglycopeptides in the following 4 peaks. The asialo-caseinoglycopeptide was .apprx.10% of the total caseinoglycopeptide. Asialocaseinoglycopeptide also could be prepd. from cheese whey acidified to pH 3.0 and heated for 1 h at 98.degree.. Sialic acid in caseinoglycopeptide was completely released by this treatment. The yield of caseinoglycopeptide was .apprx.1.1 g from 100 g cheese whey powder.
ST whey casein ***glycomacropeptide*** sepn; asialoglycomacropeptide whey; affinity chromatog ***glycomacropeptide*** ; ion exchange ***glycomacropeptide***
IT Whey
(***glycomacropeptide*** and asialoglycomacropeptide prepn. from)
IT Caseins, preparation
RL: PREP (Preparation)
(.kappa.-, ***glycomacropeptides*** , sepn. of, from whey by ethanol pptn. and chromatog.)

09/450 217

TI Glycomacropeptide from cheese whey protein concentrate enhances IgA production by lipopolysaccharide-stimulated murine spleen cells

AU Yun, S. S.; Sugita-Konishi, Y.; Kumagai, S.; Yamauchi, K.

SO Animal Science and Technology, (1996) Vol. 67, No. 5, pp. 458-462. 15 ref.
ISSN: 0021-5309

* * * * * * * * * * * *

TI Functional milk protein products

AU Mulvihill, D. M.; Andrews, A. T. [EDITOR]; Varley, J. [EDITOR]

CS Food Chemistry Department, University College, Cork, Irish Republic.

SO Biochemistry of milk products, (1994) pp. 94-113. Special Publication No. 150. 82 ref.
Publisher: Royal Society of Chemistry. Cambridge
Price: pounds sterling39.50.
ISBN: 0-85186-702-2

* * * * * * * * * * * *

TI A new isolation method of caseinoglycopeptide from sweet cheese whey

AU Saito, Tadao; Yamaji, Atsuo; Itoh, Takatoshi

CS Coll. Agric., Tohoku Univ., Sendai, 981, Japan

SO J. Dairy Sci. (1991), 74(9), 2831-7
CODEN: JDSCAE; ISSN: 0022-0302

Rq 5/23/00